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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/462,475	01/14/2000	MASAHIRO WATANABE	108384-09007	5134

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EXAMINER
ILDEBRANDO, CHRISTINA A

ART UNIT	PAPER NUMBER
1725	19

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Please find below and/or attached an Office communication concerning this application or proceeding.

AS-19

Office Action Summary	Application No.	Applicant(s)	
	09/462,475	WATANABE, MASAHIRO	
	Examiner	Art Unit	
	Christina Ildebrando	1725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

P riod for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 August 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 2* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 2* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by Fleming et al.

Fleming et al. (US 3,884,838) discloses a catalyst composition useful for reacting carbon monoxide and/or carbon dioxide with hydrogen to form methane and water. The catalyst composition comprises ruthenium metal and minor amounts of reduced amorphous tungsten oxide (column 2, lines 52-55). The catalyst can also contain platinum as a ruthenium-platinum alloy (column 4, lines 45-50). A suitable catalyst can contain ruthenium in an amount of 40-95 percent by weight and platinum in the range of 0-47.5 percent by weight (column 6, lines 40-45). Fleming et al. further teaches that the catalyst composition can be supported on a crystalline aluminosilicate support such as mordenite (column 10, lines 32-40).

As each and every element of the claimed invention is taught in the prior art as recited above, the claims are anticipated by Fleming et al.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 7-256112 in view of Database of Zeolite Structures.

JP 7-256112 discloses a catalyst composition comprising a zeolite and a metal supported thereon (Abstract). Suitable zeolites include those zeolites having an aperture size between 0.4 and 2 nm (0006, lines 41-42). The catalyst comprises a metal selected from the group consisting of platinum, palladium, rhodium, iridium, ruthenium, nickel, cobalt, and iron, or mixtures or alloys thereof (0006, lines 42-47). Alloys of metals with platinum are preferred (0006, lines 42-47). The reference does not teach the amount of the metal other than platinum present in the alloy. However, it is considered that it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the instantly claimed ranges through process optimization, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re* Boesch 205 USPQ 215.

JP 7-256112 does not disclose that the zeolite carrier is mordenite.

Database of Zeolite Structures (http://www.iza-structure.org/databases) teaches that mordenite has an aperture size of 7.542 angstrom (0.75 nm).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used mordenite as the zeolite carrier in the catalyst taught by JP 7-256112 in light of the disclosure of in the Database of Zeolite Structures. The

selection of a known material based on its suitability for its intended use has been held to be a prima facie case of obviousness. *Sinclair & Carroll Co. v. Interchemical Corp.*, 65 USPQ (1945). In this case, JP 7-256112 teaches zeolites with an aperture size of 0.4-2nm are suitable for use in the invention. The database of Zeolite Structures teaches that mordenite has an aperture size which would fall within the range, which would provide motivation for one of ordinary skill to choose mordenite as the zeolite carrier in the catalyst taught by JP 7-256112.

Claims 1-2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shelef.

Shelef (US 6,117,581) discloses a fuel cell electrode comprising conductive zeolite support material. The electrode further includes particulate noble metals, such as platinum, palladium, ruthenium, rhodium, osmium, iridium, and their alloys (column 4, lines 1-5). Platinum alloys are the preferred noble metal materials (column 4, lines 4-5). The support material comprises carbon and zeolite (column 4, lines 12-18). Suitable zeolites include mordenite (column 4, lines 52-55).

The reference does not teach the amount of the alloy metal other than platinum. However, it is considered that it would have been obvious to one having ordinary skill in the art at the time the invention was made to choose the instantly claimed ranges through process optimization, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. See *In re* Boesch 205 USPQ 215. One would have been motivated to do so in order to obtain the best results from the catalyst.

Response to Arguments

Applicant's arguments filed 8/12/02 have been considered but are not persuasive.

With regards to the Fleming et al. reference, applicant argues that the catalyst in the present invention does not contain reduced amorphous tungsten oxide. However, there is nothing in the instant claims which preclude the addition of tungsten oxide. Note the "comprising" language of claim 1. The instant claims are open to additional elements.

Applicant further argues that the intended use of Fleming et al. is different than the intended use instantly claimed. This argument has been considered but is not persuasive. Applicant is reminded that the instant claims are directed towards a catalyst composition and not an oxidation process. While intended use recitations cannot entirely be disregarded, in composition and article claims, the intended use must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention over the prior art. *In re Casey*, 370 USPQ 235 and *In re Otto*, 312 USPQ 458. It is the position of the examiner that the prior art structure is capable of performing the intended use and therefore meets the instant claims. Applicant has not presented any evidence which demonstrates that the different in intended use results in a structural difference in the product.

With regards to the JP reference, Applicant argues there is no disclosure that the carrier is mordenite and it is not reasonable to allege that the present invention was merely a combination of conventional technologies. The examiner agrees that there is

no disclosure in the JP reference that the zeolite is mordenite. However, the JP reference describes the properties of the zeolite which are required and the secondary reference details that mordenite possesses these properties. Therefore, it is considered that it would have been obvious to one of ordinary skill that mordenite would have been suitable, as taught by the JP reference. With regards to the unexpected results alleged by applicant, no such evidence is present in the application.

Again, it appears that applicant is relying on the intended use to differentiate the product. However, this is not proper. Applicant has not provided any evidence tending to show that the difference in intended use would result in a difference in the product.

With regards to the Shelef reference, applicant argues that the purpose and activity of the present catalyst is different from the Shelef patent. However, the instant claims are directed towards a product and not a process. As discussed in detail above, applicant has not provided any evidence that the difference in intended use would actually result in a structural difference in the product.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Ildebrando whose telephone number is (703) 305-0469. The examiner can normally be reached on Monday-Friday, 7:30-5, with Alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Dunn can be reached on (703) 308-3318. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.

CAI
April 1, 2003

TOM DUNN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700